

**ABSTRACT**

5        A gas deflector valve is incorporated with an engine cooling system, and located before an inlet to a heat exchanger used to cool hot gas from the engine as part of an EGR system. The gas diverter valve conducts the gas from the engine to the heat exchanger of the EGR system when its temperature is above normal and its cooling is required, or diverts the gas to recycle the gas directly to the engine, without it passing through the heat exchanger when the gas temperature is below the minimum limits for cooling. The gas deflector valve is actuated by a pneumatic actuator responsive to an electric signal from the engine's electronic control center.

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